

# PS-23

## NIGHT VISION GOGGLES

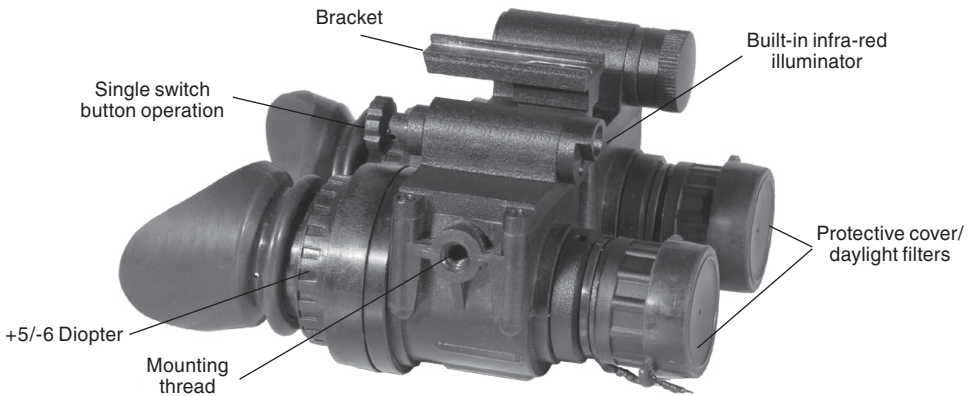
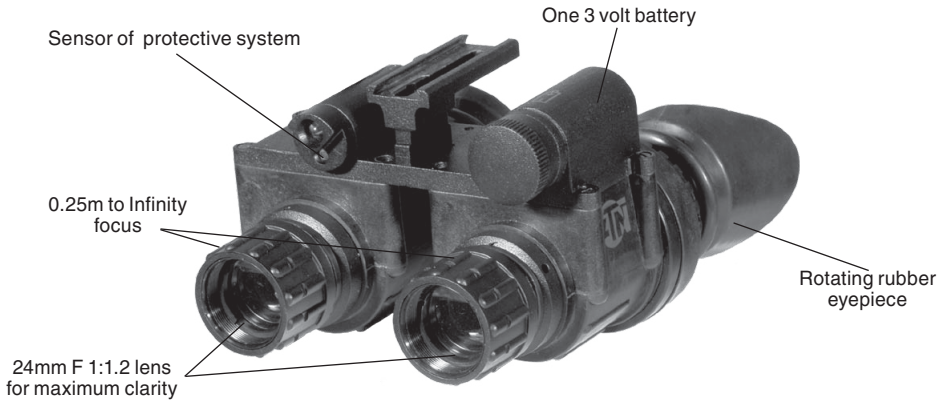


### *u s e r ` s   g u i d e*

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## SPECIFICATIONS

PS-23 helmet mount (optional)



3x Lenses (optional)



Generation .....	2nd, 2nd+, 3rd, 4th
Magnification .....	1X (optional 3X)
Detection range .....	200(Gen.2) or 350(Gen.3) m/y
Recognition range .....	150(Gen.2) or 300(Gen.3) m/y
Lens System .....	24 mm; F1:1.2
Field of view .....	40°
Interpupillary adjustment .....	55mm-72mm
Range of Focus .....	0.25m to ∞
Power Supply .....	3 volt battery (CR123A)
Battery Life .....	35 hours (10 hours with IR illuminator)
Operating Temp .....	-40°C to +40°C
Waterproof .....	20 m for 1 hour
Dimensions .....	151x85x120 mm (6" x 3.4" x 4.7")
Weight .....	0.7kg (1.5 lb)

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# FEATURES

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- High Quality light intensifier tube
- Super fast lens system provides the user with a clear and sharp image
- Built-in Infra Red illuminator lets you see even in total darkness
- 3x lenses (optional)
- Adjustable Flip-up headmount for hands free use
- IR-on and Low Battery indicators
- Automatic brightness control for high-light

protection, unit will turn off automatically if exposed to excessive light for more than 10 seconds. If the unit is move away from the bright light, it will reactivate automatically.

- Rugged and versatile design
- Single switch knob operation
- Camera/camcorder-adaptable
- Uses one 3V lithium battery
- Environmental: Water resistant
- Lifetime warranty

# APPLICATION

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The PS-23 Night Vision goggles is one of the most versatile night vision devices available. This unit can be handheld, head-mounted for hands free usage, it is camera/ camcorder adaptable, and can be 3x binocular. The intergrated IR illuminator enhances the ability of the user to read maps and operate in confined, zero light areas. The PS-23 is available with several image intensifier options to meet a wide array of specification requirements.

The PS-23 night vision goggles is a complex optoelectronic system for individual use. The device consists of the objective lens assembly, eyepiece and the body. The body contains an image intensifier tubes assembly with an integrated high voltage power source and the battery housing.

Objective lens protective cover is intended to protect the objective lens from dust and scratches. It also will act as a daylight filter, allowing you to test the scope in daylight or other bright light situations. The pinhole in the center of the protective cover allows the user to check the operation ability of the device in daylight conditions.

**NOTE:** Do not test the scope in daylight conditions even with the daylight filter/lens cap on for more than ten (10) minutes.

# OPERATION

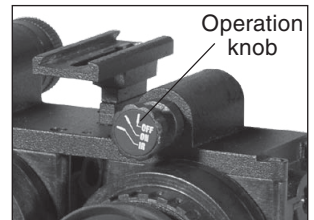
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- Take the goggles out of the case.
- Install the battery(3 Volt, CR123A) into the housing with the polarity order as shown on the scope.
- Rotate the operation knob from "OFF" position to "ON" position to turn the unit on. The protective lens cover still attached to the lens. **Do not turn the unit on in the daytime without the protective lens cap on.** You should see green glow in the eyepiece.
- Observe the scene and adjust the diopter for optimal image clarity.
- You may now enter a dark environment or simply shut the lights off in order to darken the room.
- Next, remove the lens cap/daylight filter. Adjust the front lens for the distance of the focus. You should not have to readjust the diopter.
- To turn the unit off, rotate the operation knob from "ON" position to "OFF" position.

# FOCUSING

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To focus the PS-23, first you will need to adjust the diopter. Simply turn the diopter clockwise until it stops. Then, while looking through the diopter at an object, slowly turn the diopter back counter clockwise until the grain in the image is sharp.

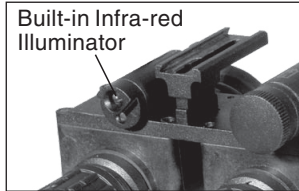


**NOTE:** We suggest that you focus the diopter during daylight with the filter on.

Next focus the front lens until the image and the grain are both sharp. When you are in low-light conditions and the daylight filter is off, you may focus the front lens to receive sharp image, the diopter should not be adjusted.

**NOTE:** The front lens should be readjusted as you view objects at different distances.

## INFRA-RED ILLUMINATOR



Infra-red illuminators, or IR illuminators, are common to night vision. The IR light greatly enhances the performance of the PS-23 while remaining almost totally invisible to the naked eye.

To turn the IR on, draw and rotate the operation knob to "IR" position.

It is important to remember that the IR illuminator is simply an infra red light source, and like any light source, it may lose its effectiveness over a great distance.

## FLIP-UP HEADSET



### FITTING THE HEADGEAR

- 1) Fit the head gear to your head size. Adjust the head gear first before attaching the PS-23 to it.
- 2) Loosen all the straps and place the head gear on your head.
- 3) Tighten the straps until the head gear fits firmly.

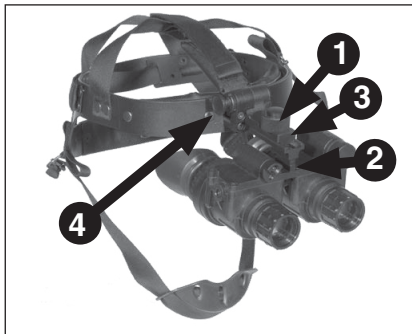
### GOOGLES INSTALLATION AND ADJUSTMENT

Now you are ready to mount the PS-23 on to your headgear.

- 1) Remove the already adjusted head gear from your head.
- 2) Push button [1] and insert the bracket [2] of the PS-23 to the rail of the headset.
- 3) Place the head gear with PS-23 onto your head.
- 4) Loosen the screw [3] and move the unit along the rail for eye relief adjustment .

The PS-23 headset has a flip-up mechanism. Push the button [4] on the side of mount and lift the unit up until the unit fixates in the top position.

Push same button to lower PS-23 to viewing position.



## PROTECTIVE SYSTEM

The automatic highlight protective system analyzes light exposure with the sensor . If the level of light exposure exceeds allowable the red indicator will turn on. If high light exposure is kept more than 10 seconds the device automatically will off. If you move the unit away from the bright light after it shuts off the unit will turn back on. If short-term actuation of a sight in a highlight condition (for check of serviceability) is necessary the sensor should be closed by a cover.

**NOTE:** The automatic highlight protective system and automatic brightness control system do not protect a sight from damage by bright light sources (a fire, headlights of the automobile, lanterns, etc.). Do not point the device at a bright light source.

# AUTOMATIC SHUT-OFF SYSTEM

The automatic shut-off system turn the power off when the device is upright on the flip-up headset. When device is returned into the working position the system turn the power on again.

## 450 MW INFRA-RED ILLUMINATOR (OPTIONAL)

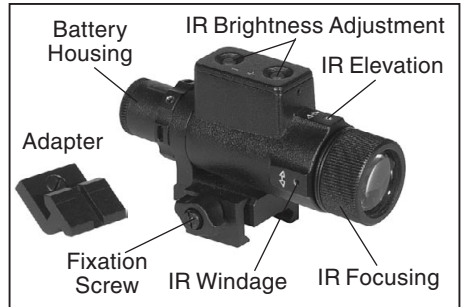
The 450 mW IR Illuminator works on a separate battery from the main unit. To install the battery unscrew cap and insert battery in the same direction as depicted by the diagram on the IR. To install the 450mW IR Illuminator to the scope screw the adapter into the thread on the scope. Install IR to the rail of adapter and screw fixator.

The IR illuminator control buttons are located on its side. To switch the Digital IR illuminator on/off press “+” and “-” buttons simultaneously. When the IR illuminator is switched on you can see the green LED lit. By pushing the buttons “+” and “-” you may adjust the IR brightness.

The IR beam is focusable to change the field of coverage. To change the beam width slightly turn the IR lens.

You could change the IR control panel fitting your needs. The screw-tool included into the set should be used for weakening the fixing screw located on the IR. Rotate the IR placing it in the most convenient position. Tighten the screw with the screw-tool to fix the new position.

For installation IR450 use adapter with Picatinny rail. Mount the adapt



## 3X LENSES (OPTIONAL)

The additional 3X Afocal Lenses a for PS-23 transform it to 3X binocular.

To install 3X Afocal Lenses screw it on the front lens of PS-23.



## CAMERA ADAPTER (OPTIONAL)

To use your PS-23 with a 35mm camera or camcorder you will need the following:

- 1) If you plan to use a camcorder then your camcorder must have a MACRO feature. Most modern camcorders today have a MACRO feature built-in.
- 2) If you plan to use a 35mm camera, you will need a MACRO lens. If you don't have one, we advise that you contact your local camera store.
- 3) You may or may not need a STEP-UP or STEP-DOWN ring in order to adapt the camera adapter to your lens.

**NOTE:** The camera adapter comes with 37mm and 52mm threads. If you need other sizes your local camera store should be able to help.

- Remove the rubber eyecup from the PS-23
- Screw the camera adapter onto the front of the lens on your Video camera's lens or your 35mm camera's lens.
- Loosen the three set screws on the camera adapter.
- Place the camera adapter over the PS-23's eyepiece.
- Tighten the three set screws to fit snugly to the PS-23's eyepiece



- You may need to focus the 35mm camera or video camera in combination with the PS-23 in order to get the sharpest possible image.
- We suggest that you find an open space to work in. Focus the PS-23 so that the scene is at its sharpest. For best results you should disable the auto focus (if any) on either the 35mm camera or the video camera and manually focus the 35mm camera or the video camera. Once the image is sharp, then simply adjust the PS-23's front lens to change focus.

*\*An important part to remember is that you are not taking a picture of an object that is far away from you, but you are actually taking a picture of a phosphorous screen of the PS-23 that is only 2-3 inches away.*

## WARNINGS AND CAUTIONS

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- Always remember to turn off the scope when it is not in use. If you do not plan on using your scope for a period of more than 10 days, you should remove the batteries.
- Keep lens cap on when not in use.
- Avoid contact with dust, steam, and gas.
- The scope are not harmful to the user or the environment.
- Do not disassemble: **it will void your warranty.**
- Evaluate the scopes function by looking through it in a lit environment with the lens cap put on. Never use in daylight without the daylight filter lens cap on. Do not surpass ten minutes of testing.
- Never point the scope at a bright light source.
- Adverse atmospheric conditions such as fog, smog, or haze and a lack of ambient light (moon or starlight) may diminish the effective viewing distance. All technical data for this unit was compiled in a controlled environment.
- If you use the rubber eyecaps for a long period of time, you may suffer skin inflammation. If you develop any symptoms, consult a doctor immediately.

## TROUBLESHOOTING

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**Q:** Flashes, flickers, or clicking occur while operating

**S:** If it occurs within the first five minutes of inserting new batteries, it is normal and the device will resume normal operation soon thereafter. If it occurs for more than 10 minutes, contact for service instructions.

**Q:** Dark spots on screen.

**S:** These are either cosmetic blemishes in the intensifier tube or dust particles.

**Q:** Screen becomes darker than at previous use.

**S:** Replace batteries. If problem persists, contact your dealer or other authorized service representative for service instructions.

**Q:** Image not clear.

**S:** Adjust objective lens, and/or the eyepiece.



## **ATN LIMITED LIFETIME WARRANTY**

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ATN Limited Lifetime Warranty is limited to the product being free of manufacturer defects in materials and workmanship. In regards to night vision products the image intensifier tube is warranted to be free from manufacturer defects for a period of 2 years (defects do not include minor black spots or blemishes in viewing area). ATN will repair or replace said products or part thereof which upon inspection by ATN are found to be defective in materials or workmanship. As a condition to the obligation of ATN to repair or replace said product, the product must be returned to ATN together with proof-of-purchase satisfactory to ATN. This warranty does not cover damages caused by misuse or improper handling. This warranty is null and void if modification or maintenance is provided by parties other than ATN Corp. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, ATN, at its option, will either repair or replace the product, and such action on the part of ATN shall be the full extent of ATN's liability, and the Customer's sole and exclusive remedy. This warranty does not cover a product (a) used in other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the Customer or by any party other than ATN without prior written consent of ATN; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either ATN or the ATN dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement units are not available due to reasons beyond the control of ATN. ATN shall not be responsible for any defects or damage that in ATN's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which is electrically or mechanically incompatible with or of inferior quality to the product, as well as failure to maintain the environmental conditions specified by the manufacturer. **CUSTOMER IS HEREBY NOTIFIED THAT OPERATION OF THE EQUIPMENT DURING DAYLIGHT HOURS OR UNDER ANY EXCESSIVE LIGHT CONDITIONS MAY PERMANENTLY DAMAGE THE INTERNAL COMPONENTS OF THE UNIT AND SAID DAMAGE WILL NOT BE COVERED UNDER THIS WARRANTY.** This warranty is extended only to the original purchaser. Any breach of this warranty shall be waived unless the customer notifies ATN at the address noted below within the applicable warranty period.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

## **LIMITATION OF LIABILITY**

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ATN will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. ATN's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by ATN to the Customer shall not be interpreted, construed or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside ATN and the Customer; ATN's obligations under this Agreement extend solely to the Customer. **ATN's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to ATN by the customer or customer's dealer. ATN shall not, in any event, be liable for special, indirect, incidental or consequential damages, including, but not limited to, lost income, lost revenue or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.**

## **PRODUCT WARRANTY REGISTRATION**

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In order to validate the warranty on your product, ATN must receive a completed Product Warranty Registration Card for each unit. Please complete the form below and immediately mail it to our Service Center: ATN Corporation, 20 South Linden Ave., Suite 1B, South San Francisco CA 94080. Products qualifying for warranty repair will be either repaired or replaced within 10 business days of receipt of merchandise unless the customer is notified otherwise.

## **OBTAINING WARRANTY SERVICE**

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To obtain warranty service on your unit, take or send the product, postage paid, with a copy of your sales receipt to our service center, ATN Corporation at the address noted above. All merchandise must be fully insured with the correct postage; ATN will not be responsible for improper postage or, missing or damaged merchandise during shipment.



For customer service and technical support, please contact  
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